

CLAIMS

What is claimed is:

1. A gas turbine engine comprising:
 - a compressor section having a plurality of rings of blades and vanes;
 - a turbine section downstream of the compressor section along a core flowpath of the engine; and
 - an intermediate case having inboard and outboard portions forming inboard and outboard walls for the core flowpath;
 - wherein at least a first of said rings of said compressor section vanes extends between inboard and outboard stator shrouds, at least a first of which is welded to the intermediate case.
2. The engine of claim 1 wherein the compressor section is a low pressure compressor section and the engine further comprises:
 - a high pressure compressor section downstream of the low pressure compressor section.
3. The engine of claim 1 wherein said first of said rings is a downstreammost of said rings.
4. The engine of claim 1 wherein:
 - the inboard and outboard stator shrouds are respectively welded to the intermediate case inboard and outboard portions.
5. The engine of claim 1 wherein:
 - said first of the inboard and outboard stator shrouds is a full annulus.
6. The engine of claim 1 wherein:
 - said first of the inboard and outboard stator shrouds is a forging or a stamping; and
 - said intermediate case is a casting.
7. The engine of claim 1 wherein:
 - each of the compressor vanes has an inboard foot, an airfoil extending outboard from the foot;

each foot is secured to the inboard shroud via fasteners, with an outboard surface of the foot facing an inboard surface of the inboard shroud; and
each vane extends through an associated aperture in the outboard shroud.

8. The engine of claim 7 wherein:

each vane has a stablug at an outboard end of the airfoil protruding beyond an outboard surface of the outboard shroud and sealed relative to the outboard shroud.

9. A method for remanufacturing the gas turbine engine of claim 1 comprising:

removing said first of the inboard and outboard stator shrouds; and

welding a replacement shroud in place of said first of the inboard and outboard stator shrouds.

10. The method of claim 9 further comprising:

individually installing replacement vanes to said replacement shroud in place of said first ring of said compressor vanes after said welding.

11. A method for reengineering a gas turbine engine configuration from a first configuration having compressor exit stator inboard and outboard shrouds secured to first and second portions of an intermediate case by first and second pluralities of fasteners engaged to first and second pluralities of fastener-receiving features of the intermediate case, the method comprising:

altering the initial configuration to a reengineered configuration having a reengineered intermediate case welded to a reengineered at least one of exit stator inboard and outboard shrouds.

12. A method for retrofitting a gas turbine engine comprising:

removing compressor exit stator inboard and outboard shrouds initially secured to first and second portions of an intermediate case by first and second pluralities of fasteners engaged to first and second pluralities of fastener-receiving features of the intermediate case;

destructively removing a portion of the intermediate case at least partially containing at least one of said first and second pluralities of fastener-receiving features.

13. The method of claim 12 further comprising:

welding at least one replacement stator shroud to the intermediate case.